Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1, 2, 4-8 and 10-82 are pending in this application, with 1, 2, 5, 6, 7, 8, 11, 12, 19, 30, 41, 51, 62 and 72 being the independent claims. Claims 1, 2, 5 - 8, 11 and 12 are amended. Claims 13-82 are added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

In the Office Action dated January 29, 2004, the title is objected to. Claims 1, 2, 4, 5, 7, 8, 10 and 11, as per discussion with the Examiner, stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hughes, U.S. Patent No. 6,532,548. Claims 3, 5, 9 and 11 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 3, 6, 9 and 12 are allowable, subject to amendments to address the rejections under 35 U.S.C. § 112, second paragraph.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

In-person interview at the USPTO of March 15, 2004

Applicants' representative thanks the Examiner for the courtesies extended during the in-person interview at the United States Patent and Trademark Office on March 15, 2004. During the interview, the § 112 and the § 102 rejections were discussed, and agreement was reached regarding a number of issues.

The Examiner indicated, upon further review, that independent claim 7 does not need to be amended to address the indefiniteness rejection, since it recites the definition of the variable "n". The Examiner therefore indicated that claims 9 and 12 are allowable, if rewritten in independent form. The Examiner further indicated that claims 3 and 6 would be allowable, subject to an amendment to recite the definition of "n".

Applicants' representative also discussed the Hughes reference, and the differences between the language of the independent claims and the disclosure of Hughes, as further addressed below.

Objection to the title

The title has been amended to address the objection. Applicants request that the objection to the title be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 112, second paragraph

As discussed during the interview at the United States Patent and Trademark Office on March 15, 2004, claim 1 is amended to address the § 112, second paragraph rejection. Applicants believe that no further amendments are necessary to the claims to address the indefiniteness rejections, and request that these rejections be reconsidered and withdrawn.

Rejections of claims 1 and 7 under 35 U.S.C. § 102(b)

Original claims 1 and 7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hughes. As discussed during the interview, claim 1 recites "a distributed arbitrarily-connected network of L servers." The Hughes reference is directed to a modification of a conventional RAID storage device, not to a network of servers. As discussed during the interview, the storage elements of Hughes are not servers in any commonly-understood sense of the word. For example, at col. 3, lines 4-14 of Hughes, numerous examples of such storage elements are given, and none of them are analogous to a server that can be connected to a network. In other words, in Hughes, there are no servers, and no network of servers.

However, in the interest of expediting the prosecution of this case, claims 1 and 7 have been amended to incorporate allowed claims 3 and 9, respectively. The subject matter of original claims 1 and 7 will be pursued in a continuation application.

Rejections of claims 2, 4, 5, 8, 10 and 11 under 35 U.S.C. § 102(b)

Claim 2 was also discussed during the interview, and has been rewritten in independent form (without the "whereby" clause). Claim 2 recites that the data pieces are **interchangeable**. As discussed during the interview, Hughes uses parity "data pieces," which the invention of claim 2 does not. Phrased another way, the data pieces of Hughes are not interchangeable, as required by claim 2. Applicants respectfully request reconsideration and withdrawal of the rejections of this claim.

Claim 5 was also discussed during the interview, and has been rewritten in independent form (without the "whereby" clause). Claim 5 is directed to the aspect of the number of data pieces M + k depending on the fault tolerance level of the network. At least this aspect is not disclosed by Hughes. Therefore, claim 5 is allowable over Hughes for this additional reason as well. Applicants respectfully request reconsideration and withdrawal of the rejections of this claim.

Claims 8 and 11 are allowable at least for the reasons applicable to corresponding method claims 2 and 5. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of these claims.

New claims 13-82

New claims 13-82 have been added to provide additional coverage for the present invention. Some of these claims were discussed during the interview with the Examiner. Support for the language of the new claims may be found in the originally filed claims, as well as in the relevant portions of the specification and figures.

Additionally, support for the language of claims 6, 12, 26, 36, 49, 57, 68 and 78 ("about 1/k") may be found at page 8, line 16. Support for the language of claims 13, 16, 27, 38, 46, 59, 69 and 80 ("at least M+k") is inherent in the description of the invention. Support for the language of claims 14, 17, 28, 39, 47, 60, 70 and 81 ("same algorithm") may be found at page 11, lines 10 et seq. and in the figures. Support for the language of claims 23, 34, 45, 56, 65 and 76 (L can be variable) may be found at page 12, lines 7-8 and page 10, line 22 et seq. Support for the language of claims 23, 34, 45, 56, 65 and 76 ("M+k≤L") may be found throughout the specification, and

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follows logically from the description (in other words, M+k>L makes no sense from a mathematical perspective).

Claims 19 and 41 are method and system claims directed to the aspect of "creating M + k **functionally equivalent** data units for storage on M + k servers." As discussed during the interview with the Examiner, the data units of Hughes are not functionally equivalent (in the sense that some of them contain parity data, not just "useful information"). Accordingly, at least for this reason, these claims, and all their dependent claims, are believed to be allowable.

Claims 30 and 51 are method and system claims directed to the aspect of the number M being **dynamically adjustable based on a fault tolerance level of the network**. As discussed during the interview with the Examiner, at least this aspect of claims 30 and 51 is not disclosed by Hughes. Accordingly, these claims, and all their dependent claims, are believed to be allowable.

Claims 62-82 are "computer program product" counterparts of the newly added method claims. Although a "computer program product" counterpart of the claims is not explicitly discussed in the specification, it would be self-evident to one of ordinary skill in the art that the software method and system at issue can be provided on a computer-readable medium.

Conclusion

All of the stated grounds of rejection and objection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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